

EVAPORATION DATA

Revised as of October 6, 2000

The U.S. Bureau of Reclamation recently completed a series of evaporation tests of Salton Sea water. The tests were conducted in an environmental chamber at Reclamation's research laboratory in Denver. The data and information obtained during the testing consisted of the following:

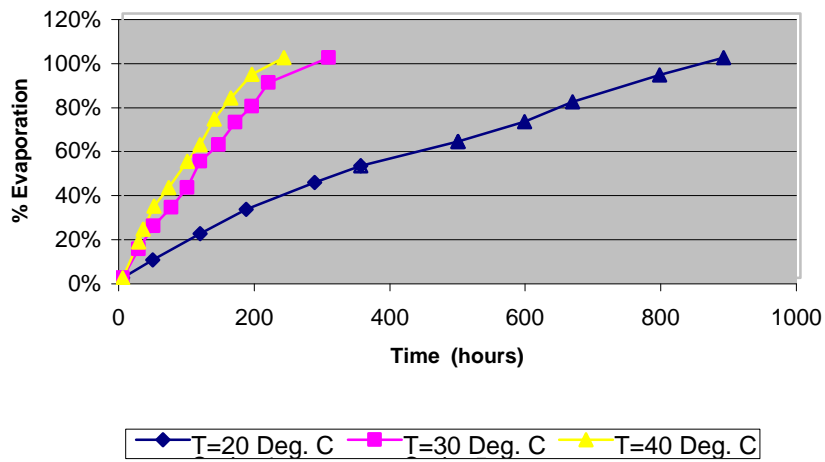
- 1) Evaporation Rate – The rate of evaporation of Salton Sea water as a function of temperature and salinity (i.e. as the water becomes concentrated through evaporation) under conditions of constant air movement and relative humidity. The testing was done at three different temperatures: 20C (68F), 30C (86F), and 40C (104F).
- 2) Conductivity of Water – The electrical conductivity (and TDS) of the Sea water as a function of temperature and salinity.
- 3) ph, Density and Viscosity of Water – Each as a function of temperature and salinity.
- 4) Mass of Precipitate – The amount of salt that precipitates from Sea water as a function of temperature and salinity.
- 5) Precipitate Identification – The identity of the salt compounds that precipitate from Sea water as a function of temperature and salinity.

In addition, separate tests were conducted to determine the density of the salts that precipitate during the evaporation of Sea water under a 4–5 head of water.

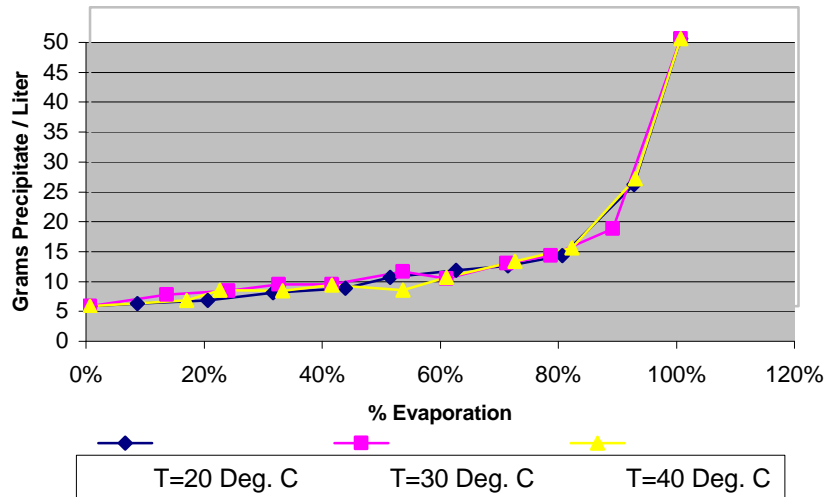
The test results are shown in the attached plots for each of the three temperatures: 20, 30, and 40C.

- Rate of Evaporation
- Total Precipitation (in gms per liter of water) vs. % Evaporation
- % Precipitation vs. % Evaporation – may be useful for determining when to move concentrated water between ponds
- Fluid Density (Sp Gr) and Viscosity vs. % Evaporation – useful for calculating pumping power
- Conductivity and/or TDS vs. % Evaporation

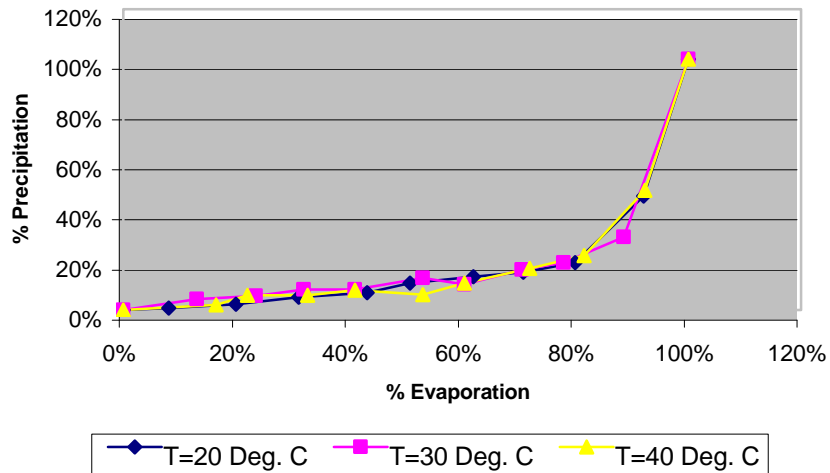
Rate of Evaporation



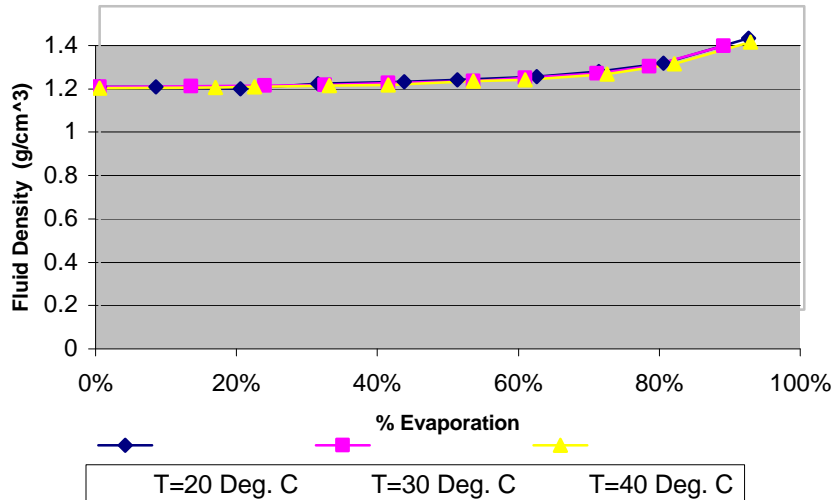
Total Precipitation vs. % Evaporation



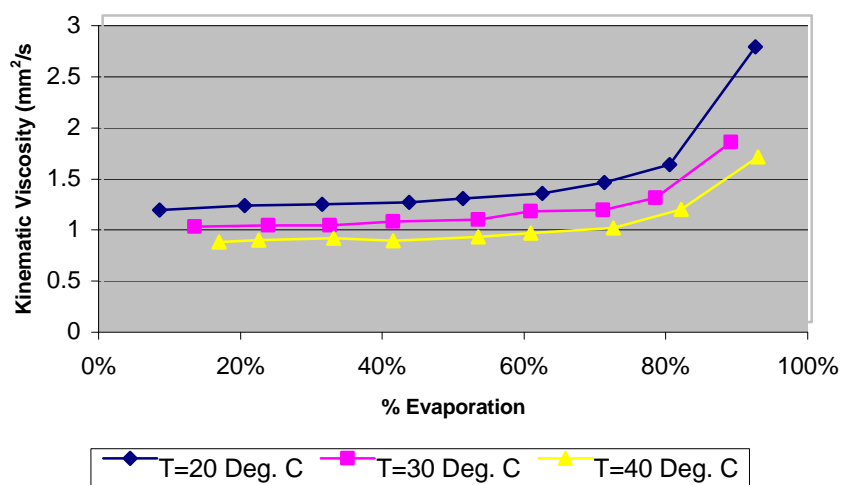
% Precipitation vs. % Evaporation



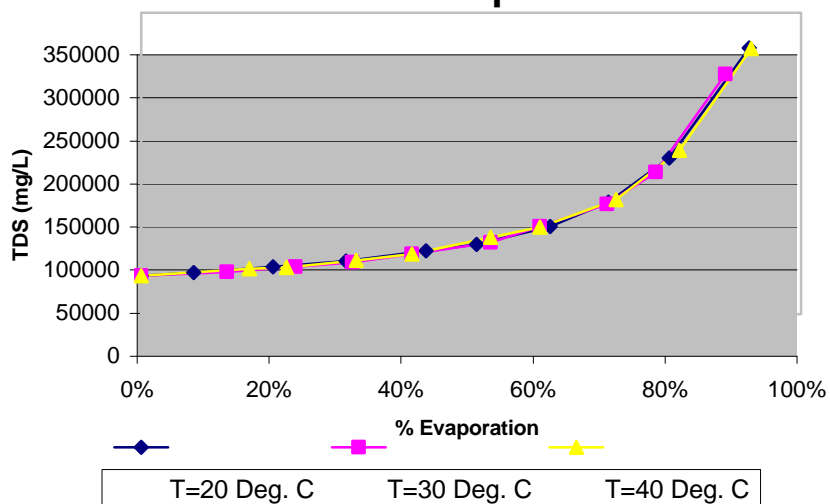
Fluid Density vs. % Evaporation



Kinematic Viscosity vs. % Evaporation



TDS vs. % Evaporation



Conductivity vs. % TDS

